## Remarks

The Examiner has objected to misspellings in Fig. 5. A replacement Fig. 5 corrected for these misspellings is submitted herein.

The Examiner has objected to using the acronym of "VTGA" and other informalities in the claims. The claims have been amended to remove these objections.

The Examiner has rejected claims 1 and 4 under 35 USC 103(a) as being unpatentable over Norem (US 3,554,001) in view of ASTM E1582-00. Norem discloses a thermal gravimetric analyzer. Norem further discloses that the analyzer may be calibrated with ferromagnetic materials having different Curie points. However, the materials which Norem discloses range from nickel with a Curie point of 360 degrees C to iron with a Curie point of 770 degrees C. ASTM also discloses the use of ferromagnetic materials for use as Curie point references. ASTM also discusses specific Curie point standards ranging (in large intervals) from Alumel at 163 degrees C to cobalt at 1120 degrees C. The present invention uses specific standards which cover a lower temperature range, from about 50 to 200 degrees C. This temperature range is much more suitable and desirable to calibrate a VTGA for studies of more volatile materials. Claim 1 as amended specifically recites using a plurality of ferromagnetic slugs having Curie temperatures distributed in small intervals which span the desired temperature range.

The Examiner has rejected Claims 2 and 3 under 35 USC 103(a) as being unpatentable over Norem and ASTM in view of Tchernev (US 4, 208,911).

Claims 2 and 3 have been cancelled; however the claim elements of claim 3 have now been incorporated in the amended version of claim 1. Tchernev describes using a series of ferrite materials with varying compositions to alter the Curie temperature. The use of ferrite materials exhibiting ferrimagnetism are difficult to use for Curie point standards. First the preparation of ferrite materials require specialized handling and procedures. Accordingly, it is a difficult task to prepare samples with precisely predictable properties. Even Tchernev admits this: "...it is not practical at present to produce a mixture which will result in the exact desired transition temperature..." (Col 2, line 28). This difficulty with ferrites is well known in the art. For example:

"The preparation of polycrystalline ferrites with optimum properties is considered to be difficult and complex. The main problems involved are due to the fact that most of the properties needed for ferrite applications are not intrinsic but extrinsic. That is, the ferrite is not completely defined by its chemistry and crystal structure but also requires knowledge and control of the parameters of its microstructures, such as density, grain size, and porosity and their intra- and inter-granular distribution". (P. I. Slick, "Ferrites for non-microwave applications", in Ferro-magnetic Materials, 1980).

By contrast, the present invention uses ferromagnetic slugs which are fabricated principally by melting two metals. The composition of each final slug is easy to control. Furthermore the property of each final slug depends much less on extrinsic factors. Accordingly, the use of the ferromagnetic slugs as described

in claim 1 results in a considerably improved calibration method for relatively low temperatures.

Applicant admits the previous use of Monel, a NiCu alloy with about 28-30% of Cu as a previously known, single Curie point standard. The present invention provides a series of standards which span a range of relatively low temperatures. These standards provide a much more useful calibration of VTGAs.

Applicant respectfully request reconsideration of the present application.

Respectfully submitted,

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**In the Drawings:**

Please replace Fig. 5 with the replacement version of Fig. 5 enclosed wherein. The amended version of Fig. 5 corrects misspellings and adds no new matter.